

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND
INTERFERENCES

In re Application of

Wilhelmus Jacobus Van Gestal

METHOD OF AND DEVICE FOR
RECORDING INFORMATION

Serial No. 09/787,058

Filed: March 13, 2001

Confirmation No. 1079

Group Art Unit: 2151

Examiner: Karen C. Tang

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Serial No. 09/787,058

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Real party in interest

The real party of interest is the Assignee who is U. S. Philips Corporation, a corporation existing under the laws of the State of Delaware (hereinafter Appellant).

Related appeals and interferences

There are no related appeals or interferences to the present application that are known to appellants, the appellant's legal representative, or assignee which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of the Claims

Claims 1-20 are drawn to a method and device for recording information on a disc of having tracks divided into blocks, which recording tracks define a recording area of the disc, the recording area includes at least a freely accessible addressable user area; wherein the information to be recorded is divided into data packets having the size of a block, wherein successive data packets are recorded in different blocks of said user area; wherein, if a block appears to be defective, a replacement recording for the relevant data packet is effected in a replacement zone within said user area; and wherein during the recording session, the replacement zone has a size that can change dynamically. Claims 1-7, 10 and 16-20 are rejected, claim 11-15 are allowed. Claims 8 and 9 are objected to as being dependent upon a rejected base claim but otherwise stated as being allowable. A copy of claims 1-20 is contained in Appendix III following this brief.

Status of the Amendments After Final

A response was filed subsequent to the final rejection to overcome the Examiner's rejection of claims 1-7, 10 and 16-20 are rejected under the provisions of 35 U.S.C. §102(b) and claim 5 is rejected under 35 U.S.C. §103(a). The Examiner in an Advisory Action dated March

16, 2006 indicated that the rejections of claims 1-7, 10 and 16-20 under the provisions of 35 U.S.C. §102(b) and 35 U.S.C. §103(a) stand.

Summary of the Claimed Subject Matter

The appealed claims define subject matter for a method and device for recording information on a disc of having tracks divided into blocks. The recording tracks define a recording area of the disc. The recording area includes at least a freely accessible addressable user area. The information to be recorded is divided into data packets having the size of a block, wherein successive data packets are recorded in different blocks of said user area. If a block appears to be defective, a replacement recording for the relevant data packet is made in a replacement zone within the user area. During the recording session, the replacement zone has a size that can change dynamically. The present invention solves provides a replacement area that allows replacement recordings to be made with numerous blocks once a defective area is found. Thus, the present invention does not require numerous jumps between the recording area and the replacement area and addresses a need that exists within the prior art.

Appealed claim 1 defines subject matter for a method of recording information, particularly real time video or audio as described on page 3, lines 15-16 of the specification as originally filed. A recording disc (2) of the type having a multitude of concentric substantially circular recording tracks (3) divided into blocks (45), particularly an optical disc, which recording tracks (3) together define a recording area (40) of the disc (2), which recording area (40) includes at least a freely accessible addressable user area (41) as shown in Figures 1 and 2 and described in the specification on page 3, lines 17-33; and on page 4, lines 18-27.

Appealed claim 1 further defines that the information to be recorded is divided into data packets having the size of a block (45), wherein successive data packets are recorded in different blocks of said user area (41). If a block (45*) appears to be defective, a replacement recording for the relevant data packet is effected in a replacement zone within said user area (41) as described in the specification on page 7, lines 10-16. During the recording session, the replacement zone has a size that can change dynamically as described in the specification on page 8, lines 23-31.

Appealed claim 11 defines subject matter for a recording apparatus adapted for recording information, particularly real time video or audio, on a recording disc (2) as described on page 3, lines 15-16 of the specification as originally filed. The recording disc (2) is of the type having a multitude of concentric substantially circular recording tracks (3) divided into blocks (45), particularly an optical disc, which recording tracks together define a recording area (40) of the disc which recording area includes at least a freely accessible addressable user area (41) as shown in Figures 1 and 2 and described in the specification on page 3, lines 17-33; and on page 4, lines 18-27.

Appealed claim 11 further defines the information to be recorded is divided into data packets having the size of a block (45), wherein successive data packets are recorded in different blocks of said user area (41). If a block (45*) appears to be defective, a replacement recording for the relevant data packet is effected in a replacement zone part of said user area (41) as described in the specification on page 7, lines 10-16.

Appealed claim 11 further defines a write control unit (20) adapted to control the write process and an allocation manager (30) adapted to determine at which location of the disc a write operation is to be effected. The allocation manager (30) is adapted to reserve two different areas for recording in a free part of the user area, a first pre-defined area being reserved for normal recording and a second pre-defined area being reserved for replacement recording and the allocation manager being adapted to inform the write control unit about these reserved areas as described in the specification on page 7, lines 10-16.

Referring to Figure 3, appealed claim 11 further defines that the write control unit 20 is adapted to effect the normal recording in the first pre-defined area (NW) and, if defective blocks (45*) are encountered, time interval effect a replacement recording for a file portion having the size of a plurality of blocks in the second pre-defined area (RW) and, upon completion of the replacement recording, to proceed with normal recording in the first pre-defined area as described in the specification on page 7, lines 27-34.

The write control unit (20) is adapted to inform the allocation manager (30), upon completion of a recording process, of the addresses used in the second pre-defined area (RW), and wherein the allocation manager is adapted to enter said addresses used in the second pre-defined area RW into a memory (32) associated with the allocation manager (RW) and into a

table of contents in an administrative area (43) of the recording area of the disc (2) as described in the specification on page 8, lines 3-15.

Appealed claim 16 defines subject matter for a method of recording information on a recording disc (2) as described on page 3, lines 15-16 of the specification as originally filed. The recording disc (2) is of the type having recording tracks divided into blocks (45), which recording tracks together define a recording area (40), which recording area (40) includes at least a freely accessible addressable user area (41) as shown in Figures 1 and 2 and described in the specification on page 3, lines 17-33; and on page 4, lines 18-27.

Appealed claim 16 further defines that the information to be recorded is divided into data packets having the size of a block (45) and successive data packets are recorded in different blocks of said user area (41). Wherein, a defective block (45*) is recorded via a replacement recording in a replacement zone (RW) of said user area (41) as described in the specification on page 7, lines 10-16. The replacement recording comprises recording a plurality of successive data packets following the data packet effected is recorded in the other part of said user area (41) as described in the specification on page 9, lines 10-19.

Grounds of Rejection to be Reviewed on Appeal

The Advisory Action dated March 16, 2006 indicated that the rejections to claims 1-7, 10 and 16-20 stand. Claims 1-7, 10 and 16-20 are the appealed claims. Appealed claims 1-7, 10 and 16-20 are rejected under the provisions of 35 U.S.C. §102(b), as being anticipated by U.S. Patent No. 5,914,928 issued in the name of Takahashi (hereinafter referred to as *Takahashi*). Appealed claims 1-3, 6 are rejected under the provisions of 35 U.S.C. §102(b), has been anticipated by U.S. Patent No. 6,367,038 issued in the name of Ko (hereinafter referred to as *Ko*). Appealed claim 5 is rejected under the provisions of 35 U.S.C. §103(a) has been obvious over *Ko* in view of European Published Application EP 0798716 by Yamamuro (hereinafter referred to as *Yamamuro*).

Argument

I. The rejection of Appealed claims 1-7, 10 and 16-20 under the provisions of 35 U.S.C. §102(b), as being anticipated by *Takahashi* (U.S. Patent No. 5,914,928).

A. The rejection under 35 U.S.C. S 102(b)

Appealed claims 1-7, 10 and 16-20 stand rejected under the provisions of 35 U.S.C. §102(e) as being anticipated by *Takahashi* (U.S. Patent No. 5,914,928). The examiner's position is that *Takahashi* disclose every element defined by appealed claims 1-7, 10 and 16-20.

The MPEP at §2131 states a "claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

B. The reference

Takahashi (U.S. Patent No. 5,914,928) teaches an information recording disk having a replacement area (see Title). The invention of *Takahashi* relates to discs that record information by a zone CLV scheme (see col. 1, lines 8-13). The replacement areas taught by *Takahashi* are formed more for each constant rotation zone (in each constant velocity zone) as discussed on col. 1, lines 62-65. Figure 5 of *Takahashi* illustrates a disc having various constant rotation zones N1, N2, N3 and N4 with respective data areas DA1, DA2, DA3 and DA4 and respective replacement areas RA1, RA2, RA3 and RA4 (see Figure 5). *Takahashi* teaches that each time a write error is generated in a data area, replacement is effected in the respective replacement area within the same rotation zone (see col. 7, lines 23-33).

Takahashi teaches on column 14, lines 24-29, the replacement of defective sectors by sectors and specifically states that "the number of spare blocks for replacement is a predetermined number." Therefore, the size of the replacement areas is static and not dynamic.

Takahashi at column 14, line 66-column 15, line 2 states that if "defective data sector found during certification is replaced (exchanged) by the first good sector following the defective sector, and causes a slip of one sector towards the end of the group. The last data sector slips into the spare sector area of the group." Thus, the replacement area in *Takahashi* may contain originally recorded sectors in addition to replacement sectors. In *Takahashi* the replacement sectors may be written in the "Data Area" in addition to the replacement areas. The

replacement area as taught by *Takahashi* does not change size just because it may contain originally recorded sectors. There is no disclosure or suggestion for the replacement area as taught by *Takahashi* to dynamically change size. Therefore, this rejection is traversed.

Column 14, lines 37-45 of *Takahashi* state that the spare blocks are used for replacement of defective sectors. The spare blocks are not disclosed or suggested by *Takahashi* are being usable as a freely accessible addressable user area. *Takahashi* only discloses that the “spare blocks can be used for replacement of defective sectors” (see column 14, lines 41-42). There is no disclosure or suggestion for part of a freely accessible addressable user area being reserved as a replacement area within *Takahashi*. *Takahashi* at column 15, lines 1-35 teaches that a defective block is exchanged with the first available good spare block and makes no mention, disclosure or suggestion for a replacement recording is made for a file portion comprising a plurality of successive data packets.

It should again be noted that the replacement zones within *Takahashi* have a predetermined size. There is no disclosure or suggestion within *Takahashi* that replacement zones can change size dynamically.

C. The differences between the invention and the reference

Appealed claim 1

The rejection to appealed claim 1 asserts that *Takahashi* disclose all the elements of the rejected claims. The examiner alleges that the replacement zone of *Takahashi* has a size that can change dynamically. The appellant, respectfully, asserts that the subject matter for the replacement zone having a size that can change dynamically is not disclosed or suggested by *Takahashi*. Therefore, all the elements defined by appealed claim 1 are not found within *Takahashi*.

Takahashi specifically states on column 14, lines 24-29, that the replacement of defective sectors by sectors and specifically states that “the number of spare blocks for replacement is a predetermined number.” The examiner’s position is that the replacement zones of *Takahashi* change size as they are filled. This definition used by the examiner in making the rejection is a rejection for the remaining space left in a replacement zone and is not a definition of the size of the replacement zone. The appellant, respectfully, asserts that the rejection may

not apply a definition that is wholly inconsistent with the definition of the replacement zone having a size that can change dynamically as provided by the specification to the present invention. The MPEP at §2111 states that “during patent examination, the pending claims must be ‘given their broadest reasonable interpretation consistent with the specification.’” *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). The definition supplied by the examiner is a definition for remaining placement space and not a definition for the size of the replacement zone. The definition supplied by the specification to the present invention on page 9, lines 1-9 is clearly that the overall replacement space can change. This is reinforced by the description within the specification to the present invention on page 8, lines 23-31. The MPEP at §2111 states that the “broadest reasonable interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach.” *In re Cortright*, 165 F.3d 1353, 1359, 49 USPQ2d 1464, 1468 (Fed. Cir. 1999). A person skilled in the art would interpret the phrase “the replacement zone has a size that can change dynamically” within appealed claim 1 as defined by the specification and would not apply a definition of the remaining space left within the replacement area for the simply because there is no reason to interpret the phrase “the replacement zone has a size that can change dynamically” as the remaining space left within the replacement area.

The specification to the present invention on page 9, lines 1-9 provides a clear definition of change “dynamically”. The specification details that virtually all of the storage space can be defective and the disc is still usable by increasing the replacement space. The definition that is given the term “the replacement zone has a size that can change dynamically” by the rejection is completely inconsistent with the definition supplied by the specification to the present invention and also completely inconsistent within the definition that a person skilled in the art would give the term “the replacement zone has a size that can change dynamically”. Moreover, *Takahashi* states on col. 15, lines 12-13 that if the “spare sector area of a group becomes exhausted during certification, the certification is regarded as a failure”; which clearly illustrates that there is not only no disclosure, but no suggestion within *Takahashi* to dynamically change the size of the replacement zone.

Therefore, all the elements defined by appealed claim 1 are not found within *Takahashi*.

Appealed claim 2

Appealed claim 2 defines the subject matter for appealed claim 1, wherein, prior to the recording session, a given part of said freely accessible addressable user area is reserved as the replacement zone. The appellant, respectfully, points out that column 14, lines 37-45 of *Takahashi* state that the spare blocks are used for replacement of defective sectors. The spare blocks are not disclosed or suggested by *Takahashi* as being usable as a freely accessible addressable user area. *Takahashi* only discloses that the “spare blocks can be used for replacement of defective sectors” (see column 14, lines 41-42). Therefore, all the elements defined by appealed claim 2 are not found within *Takahashi*.

Appealed claim 3

Appealed claim 3 defines the subject matter for appealed claim 1, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 1, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary. Therefore, all the elements defined by appealed claim 3 are not found within *Takahashi*.

Appealed claim 4

Appealed claim 4 defines the subject matter for appealed claim 1, wherein, during the recording session, the reservation of a part of the replacement zone is cancelled, if necessary, in order to make said part available again as a free user area. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 1, wherein, during the recording session, the reservation of a part of the replacement zone is cancelled, if necessary, in order to make said part available again as a free user area. Therefore, all the elements defined by appealed claim 4 are not found within *Takahashi*.

Appealed claim 5

Appealed claim 5 defines the subject matter for appealed claim 1, wherein, if a defective block is encountered during the recording process, the replacement recording is made for a file portion comprising a the plurality of successive data packets. There is no disclosure or

suggestion within *Takahashi* for the subject matter for appealed claim 1, wherein, if a defective block is encountered during the recording process, the replacement recording is made for a file portion comprising a the plurality of successive data packets. Therefore, all the elements defined by appealed claim 5 are not found within *Takahashi*.

Appealed claim 6

Appealed claim 6 defines subject matter for a recording apparatus adapted to carry out a method as claimed in claim 1. There is no disclosure or suggestion within *Takahashi* for a recording apparatus adapted to carry out a method as claimed in claim 1. Therefore, all the elements defined by appealed claim 6 are not found within *Takahashi*.

Appealed claim 7

Appealed claim 7 defines the subject matter for appealed claim 6, including: a write control unit adapted to control the write process, and an allocation manager adapted to determine at which location of a disc a write operation is to be effected; wherein the allocation manager is adapted to reserve two different areas for recording in a free part of the user area, a first pre-defined area being reserved for normal recording and a second pre-defined area being reserved for replacement recording; the allocation manager being adapted to inform the write control unit about these reserved areas; the write control unit being adapted to effect the normal recording in the first pre-defined area and, if defective blocks are encountered, time interval effect a replacement recording for a file portion having the size of a plurality of blocks in the second pre-defined area and, upon completion of the replacement recording, to proceed with normal recording in the first pre-defined area. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 6, including: a write control unit adapted to control the write process, and an allocation manager adapted to determine at which location of a disc a write operation is to be effected; wherein the allocation manager is adapted to reserve two different areas for recording in a free part of the user area, a first pre-defined area being reserved for normal recording and a second pre-defined area being reserved for replacement recording; the allocation manager being adapted to inform the write control unit about these reserved areas; the write control unit being adapted to effect the normal recording in the first pre-defined area and, if defective blocks are encountered, time interval effect a replacement recording for a file

portion having the size of a plurality of blocks in the second pre-defined area and, upon completion of the replacement recording, to proceed with normal recording in the first pre-defined area. Therefore, all the elements defined by appealed claim 7 are not found within *Takahashi*.

Appealed claim 10

Appealed claim 10 defines the subject matter for appealed claim 1, wherein, the replacement recording comprises recording a plurality of successive data packets following the data packet affected is recorded in the other part of said user area such that a number of the successive data packets is at least 100. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 1, wherein, the replacement recording comprises recording a plurality of successive data packets following the data packet affected is recorded in the other part of said user area such that a number of the successive data packets is at least 100. Therefore, all the elements defined by appealed claim 10 are not found within *Takahashi*.

Appealed claim 16

Appealed claim 16 defines the subject matter for a method of recording information on a recording disc of the type having recording tracks divided into blocks, which recording tracks together define a recording area, which recording area includes at least a freely accessible addressable user area, wherein the information to be recorded is divided into data packets having the size of a block and successive data packets are recorded in different blocks of said user area and wherein, a defective block is recorded via a replacement recording in a replacement zone of said user area; and wherein the replacement recording comprises recording a plurality of successive data packets following the data packet effected is recorded in the other part of said user area. There is no disclosure or suggestion within *Takahashi* for a method of recording information on a recording disc of the type having recording tracks divided into blocks, which recording tracks together define a recording area, which recording area includes at least a freely accessible addressable user area, wherein the information to be recorded is divided into data packets having the size of a block and successive data packets are recorded in different blocks of said user area and wherein, a defective block is recorded via a replacement recording in a replacement zone of said user area; and wherein the replacement recording comprises

recording a plurality of successive data packets following the data packet effected is recorded in the other part of said user area. Therefore, all the elements defined by appealed claim 16 are not found within *Takahashi*.

Appealed claim 17

Appealed claim 17 defines the subject matter for appealed claim 16, wherein, prior to the recording session, a given part of said freely accessible addressable user area is reserved as the replacement zone. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 16, wherein, prior to the recording session, a given part of said freely accessible addressable user area is reserved as the replacement zone. Therefore, all the elements defined by appealed claim 17 are not found within *Takahashi*.

Appealed claim 18

Appealed claim 18 defines the subject matter for appealed claim 16, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 16, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary. Therefore, all the elements defined by appealed claim 18 are not found within *Takahashi*.

Appealed claim 19

Appealed claim 19 defines the subject matter for appealed claim 16, wherein, during the recording session, the reservation of a part of the replacement zone is cancelled, if necessary, in order to make said part available again as a free user area. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 16, wherein, during the recording session, the reservation of a part of the replacement zone is cancelled, if necessary, in order to make said part available again as a free user area. Therefore, all the elements defined by appealed claim 19 are not found within *Takahashi*.

Appealed claim 20

Appealed claim 20 defines the subject matter for appealed claim 16, wherein, if a defective block is encountered during the recording process, the replacement recording is made comprising the plurality of successive data packets such that a number of the successive data packets is at least 100. There is no disclosure or suggestion within *Takahashi* for the subject matter for appealed claim 16, wherein, if a defective block is encountered during the recording process, the replacement recording is made comprising the plurality of successive data packets such that a number of the successive data packets is at least 100. Therefore, all the elements defined by appealed claim 20 are not found within *Takahashi*.

II. The rejection of appealed claims 1-3 and 6 under the provisions of 35 U.S.C. §102(b) as being anticipated via over *Ko* (U.S. Patent No. 6,367,038)

A. The rejection under 35 U.S.C. S 102(b)

Appealed claims 1-3 and 6 stand rejected under the provisions of 35 U.S.C. §102(a) as being anticipated by *Ko* (U.S. Patent No. 6, 367, 038). The examiner's position is that *Ko* discloses every element defined by appealed claims 1-3 and 6.

The MPEP at §2131 states a "claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

B. The reference

Ko teaches a recording medium for defect management having primary and supplementary replacement areas. The sizes of the primary and supplementary spare areas are determined by the number of defects generated upon initialization (see Abstract). Therefore, the sizes of the primary and supplementary spare areas are fixed amounts that are determined during initialization. On col. 5, lines 18-24, *Ko* reaffirms that the maximum allowable size for all the spare areas is determined upon initialization of the disc.

Ko teaches a supplementary spare area that has an amount that must be calculated in advance (see col. 6, lines 48-50). Accordingly, *Ko* does not disclose or suggest a spare zone that has a size that can change dynamically during the recording session.

C. The differences between the invention and the reference

The examiner's position is that since every time a defective block is detected and placed in the replacement zone, the remaining available area within the replacement zone becomes less. Therefore, the examiner asserts that the size of the replacement zone has changed and that this change is dynamic. The appellant does not concur with the line of reasoning used by the examiner in the rejection. The replacement zone as defined by the present invention as being within the user area. The replacement zone is not defined as an amount remaining within the replacement zone. The rejection attempts to apply a definition to the term "replacement zone" that is completely contradictory to the definition supplied by the rejected claims. The rejected claims define the term "replacement zone" as a part of the user area. The rejection attempts to apply a definition to the term "replacement zone" that is not a designated part of the user area but instead a portion that is not designated as user area. The appellant, respectfully, points out that the examiner does not substantiate this line of reasoning that is used in making the rejection. Simply put, the examiner does not provide any rationale to support the contention that the term "replacement zone" can be reasonable be read so broadly as to read on "an unused portion of the replacement zone" as alleged in the rejection.

The appellant, respectfully, points out that the supplementary spare area as taught by *Ko* has an amount that must be calculated in advance (see col. 6, lines 48-50). The replacement zone as defined by the rejected claims has a size that can change dynamically during the recording session. Accordingly, *Ko* teaches away from the subject matter defined by the appealed claims. There is no disclosure or suggestion within *Ko* for a replacement zone having a size that can change dynamically during the recording session.

Appealed claim 1

Appealed claim 1 defines subject matter for a method of recording information, particularly real time video or audio, on a recording disc of the type having a multitude of

concentric substantially circular recording tracks divided into blocks, particularly an optical disc, which recording tracks together define a recording area of the disc, which recording area includes at least a freely accessible addressable user area; wherein the information to be recorded is divided into data packets having the size of a block, wherein successive data packets are recorded in different blocks of said user area; wherein, if a block appears to be defective, a replacement recording for the relevant data packet is effected in a replacement zone within said user area; and wherein during the recording session, the replacement zone has a size that can change dynamically. There is no disclosure or suggestion within *Ko* for the subject matter that during the recording session, the replacement zone has a size that can change dynamically. Therefore, all the elements defined by appealed claim 1 are not found within *Ko*.

Appealed claim 2

Appealed claim 2 defines the subject matter for appealed claim 1, wherein, prior to the recording session, a given part of said freely accessible addressable user area is reserved as the replacement zone. There is no disclosure or suggestion within *Ko* for the subject matter of appealed claim 1, wherein, prior to the recording session, a given part of said freely accessible addressable user area is reserved as the replacement zone. Therefore, all the elements defined by appealed claim 2 are not found within *Ko*.

Appealed claim 3

Appealed claim 3 defines the subject matter for appealed claim 1, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary. There is no disclosure or suggestion within *Ko* for the subject matter of appealed claim 1, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary. Therefore, all the elements defined by appealed claim 3 are not found within *Ko*.

Appealed claim 6

Appealed claim 6 defines the subject matter for a recording apparatus adapted to carry out a method of appealed claim 1. There is no disclosure or suggestion within *Ko* for a

recording apparatus adapted to carry out a method of appealed claim 1. Therefore, all the elements defined by appealed claim 6 are not found within *Ko*.

III. The rejection of appealed claim 5 under the provisions of 35 U.S.C. §103(a) as being obvious over *Ko* in view of *Yamamuro* (EP 0798716)

A. The rejection under 35 U.S.C. S 103(a)

Appealed claim 5 is rejected under the provisions of 35 U.S.C. §103 (a) as being obvious over *Ko* (U.S. Patent No. 6,367,038) in view of *Yamamuro* (EP 07987716). The examiner's position is that it would have been obvious to one of ordinary skill within the art to apply the teaching of *Yamamuro* for recording replacement to the apparatus taught by *Ko*. to create the subject matter defined by appealed claim 5.

The MPEP at §2143 states that basic requirements of a *Prima Facie* case of obviousness. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure." *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

B. The references

Ko teaches a recording medium for defect management having primary and supplementary replacement areas. The sizes of the primary and supplementary spare areas are determined by the number of defects generated upon initialization (see Abstract). Therefore, the sizes of the primary and supplementary spare areas are fixed amounts that are determined during initialization. On col. 5, lines 18-24, *Ko* reaffirms that the maximum allowable size for all the spare areas is determined upon initialization of the disc.

Ko teaches a supplementary spare area that has an amount that must be calculated in advance (see col. 6, lines 48-50). Accordingly, *Ko* does not disclose or suggest a spare zone that has a size that can change dynamically during the recording session.

Yamamuro (EP 07987716) teaches an optical disc device and a replacement processing method (see Title). *Yamamuro* teaches a linear replacement process in Error Correction Code (ECC) units (see col. 14, lines 37-49). *Yamamuro* teaches replacement of defective ECC blocks by replacement ECC blocks (see col. 14, line 56-col. 15, line 1). *Yamamuro* teaches that it is not necessary to replace only single sectors of an ECC block (see col. 15, lines 11-19). It should be noted that *Yamamuro* does not disclose or suggest replacement areas within the user area. Furthermore, *Yamamuro* does not disclose or suggest dynamically altering the size of a replacement area during recording.

C. The differences between the invention and the references

Appealed claim 5

The rejection alleges that the combination of *Yamamuro* with *Ko* teaches the subject matter defined by appealed claim 5. The appellant does not concur. There is no disclosure or suggestion within *Ko* for a replacement zone that has a size that can change dynamically during the recording session. *Yamamuro* does not disclose or suggest for a replacement zone that has a size that can change dynamically during the recording session.

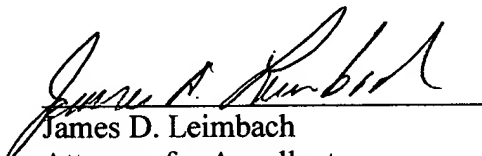
Appealed claim 5 defines the subject matter for appealed claim 1, wherein, if a defective block is encountered during the recording process, the replacement recording is made for a file portion comprising a the plurality of successive data packets. There is no disclosure or suggestion within *Ko* or *Yamamuro*, taken alone or in combination, for the subject matter for appealed claim 1, wherein, if a defective block is encountered during the recording process, the replacement recording is made for a file portion comprising a the plurality of successive data packets. Therefore, all the elements defined by appealed claim 5 are not found within *Ko*.

Conclusion

In summary, the examiner's rejections of the claims are believed to be in error for the reasons explained above. The rejections of each of claims 1-7, 10 and 16-20 should be reversed.

The Commissioner is authorized to charge fees associated with the filing of this brief to Account No. 50-3745 including any underpayments, excluding the payment of any issue fees, and to credit any overpayments to the same account.

Respectfully submitted,



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APPENDIX I. Evidence on Appeal

“None”

APPENDIX II. Related Proceedings

“None”

APPENDIX III. Claims on Appeal

1. A method of recording information, particularly real time video or audio, on a recording disc of the type having a multitude of concentric substantially circular recording tracks divided into blocks, particularly an optical disc, which recording tracks together define a recording area of the disc, which recording area includes at least a freely accessible addressable user area; wherein the information to be recorded is divided into data packets having the size of a block, wherein successive data packets are recorded in different blocks of said user area; wherein, if a block appears to be defective, a replacement recording for the relevant data packet is effected in a replacement zone within said user area; and wherein during the recording session, the replacement zone has a size that can change dynamically.
2. A method as claimed in Claim 1, wherein, prior to the recording session, a given part of said freely accessible addressable user area is reserved as the replacement zone.
3. A method as claimed in Claim 1, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary.
4. A method as claimed in Claim 1, wherein, during the recording session, the reservation of a part of the replacement zone is cancelled, if necessary, in order to make said part available again as a free user area.
5. A method as claimed in Claim 1, wherein, if a defective block is encountered during the recording process, the replacement recording is made for a file portion comprising a the plurality of successive data packets.
6. A recording apparatus adapted to carry out a method as claimed in any one of the Claim 1.
7. A recording apparatus as claimed in Claim 6, comprising:
a write control unit adapted to control the write process, and an allocation manager adapted to determine at which location of a disc a write operation is to be effected;

wherein the allocation manager is adapted to reserve two different areas for recording in a free part of the user area, a first pre-defined area being reserved for normal recording and a second pre-defined area being reserved for replacement recording;

the allocation manager being adapted to inform the write control unit about these reserved areas; the write control unit being adapted to effect the normal recording in the first pre-defined area and, if defective blocks are encountered, time interval effect a replacement recording for a file portion having the size of a plurality of blocks in the second pre-defined area and, upon completion of the replacement recording, to proceed with normal recording in the first pre-defined area.

8. A recording apparatus as claimed in Claim 7, wherein the write control unit is adapted to inform the allocation manager, upon completion of a recording process, of the addresses used in the second pre-defined area, and

wherein the allocation manager is adapted to enter said addresses used in the second pre-defined area into a memory associated with the allocation manager and into a table of contents in an administrative area of the recording area of the disc.

9. A recording apparatus as claimed in Claim 7, wherein the allocation manager is adapted to include the address of the defective block having led to the replacement recording in a list of unreliable blocks, and to inhibit the use of the blocks included in said list for allocation when said two areas are reserved upon a subsequent recording command.

10. A method as claimed in Claim 1, wherein, the replacement recording comprises recording a plurality of successive data packets following the data packet affected is recorded in the other part of said user area such that a number of the successive data packets is at least 100.

11. A recording apparatus adapted for recording information, particularly real time video or audio, on a recording disc of the type having a multitude of concentric substantially circular recording tracks divided into blocks, particularly an optical disc, which recording tracks together define a recording area of the disc which recording area includes at least a freely accessible addressable user area;

wherein the information to be recorded is divided into data packets having the size of a block,

wherein successive data packets are recorded in different blocks of said user area;

wherein, if a block appears to be defective, a replacement recording for the relevant data packet is effected in a replacement zone part of said user area;

a write control unit adapted to control the write process;

an allocation manager adapted to determine at which location of the disc a write operation is to be effected, wherein the allocation manager is adapted to reserve two different areas for recording in a free part of the user area, a first pre-defined area being reserved for normal recording and a second pre-defined area being reserved for replacement recording and the allocation manager being adapted to inform the write control unit about these reserved areas; and

the write control unit being adapted to effect the normal recording in the first pre-defined area and, if defective blocks are encountered, time interval effect a replacement recording for a file portion having the size of a plurality of blocks in the second pre-defined area and, upon completion of the replacement recording, to proceed with normal recording in the first pre-defined area; wherein the write control unit is adapted to inform the allocation manager, upon completion of a recording process, of the addresses used in the second pre-defined area, and wherein the allocation manager is adapted to enter said addresses used in the second pre-defined area into a memory associated with the allocation manager and into a table of contents in an administrative area of the recording area of the disc.

12. A recording apparatus as claimed in Claim 11, wherein a part of said freely accessible addressable user area is reserved as the replacement zone prior to recording.

13. A recording apparatus as claimed in Claim 11, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary.

14. A recording apparatus as claimed in Claim 11, wherein, during the recording session, the reservation of a part of the replacement zone is cancelled, if necessary, in order to make said part available again as a free user area.

15. A recording apparatus as claimed in Claim 11, wherein, if a defective block is encountered during the recording process, the replacement recording is made for a file portion comprising a plurality of successive data packets.

16. A method of recording information on a recording disc of the type having recording tracks divided into blocks, which recording tracks together define a recording area, which recording area includes at least a freely accessible addressable user area, wherein the information to be recorded is divided into data packets having the size of a block and successive data packets are recorded in different blocks of said user area and wherein, a defective block is recorded via a replacement recording in a replacement zone of said user area; and wherein the replacement recording comprises recording a plurality of successive data packets following the data packet effected is recorded in the other part of said user area.

17. A method as claimed in Claim 16, wherein, prior to the recording session, a given part of said freely accessible addressable user area is reserved as the replacement zone.

18. A method as claimed in Claim 16, wherein, during the recording session, an extra part of said freely accessible addressable user area is reserved as the replacement zone, if necessary.

19. A method as claimed in Claim 16, wherein, during the recording session, the reservation of a part of the replacement zone is cancelled, if necessary, in order to make said part available again as a free user area.

20. A method as claimed in Claim 16, wherein, if a defective block is encountered during the recording process, the replacement recording is made comprising the plurality of successive data packets such that a number of the successive data packets is at least 100.